

1. Northern San Juan Fruitland Coalbed Methane Development

GENERAL LOCATION AND APPROXIMATE SIZE

The area is located within and north of the Southern Ute Indian Reservation south of Durango, Colorado. The area is approximately 60,000 acres.

RANKING FACTORS

1. Need to address resource conditions:

The northern San Juan Basin of southwestern Colorado continues to be an active area of coalbed methane development in the western United States. This development of coalbed methane is an important natural resource with estimated reserves of over 50 trillion cubic feet of natural gas. Federal, private, and Southern Ute Indian Tribe (SUIT) coalbed methane mineral development has been on 320 acre spacing with enhanced recovery. Future coalbed methane development is proposed on 160 acre spacing with additional enhanced recovery. Associated and potentially associated environmental impacts of this resource development have been the subject of Bureau of Land Management (BLM) monitoring since the early 1990s. Specifically, off-site impacts at the San Juan Basin Fruitland outcrop as a potential result of "down-dip" produced water withdrawal are a concern. These impacts include explosive levels of methane and noxious hydrogen sulfide gases within homes and along the outcrop, dead and dying vegetation, seepage of methane into domestic water wells, and in some areas underground or near surface coal fires. Adding to the development and impact complexity is the suburban setting within which the development has and continues to take place. Because of these concerns we are continuing to request support to conduct necessary NEPA analysis and continued BLM support of research studies on outcrop impacts.

2. Anticipated changes in use (demand) not addressed in planning/NEPA documents:

Development to date has been with adequate Resource Management Plan (RMP) and NEPA compliance, consisting of site specific environmental assessments tiered to a 1991 RMP/Environmental Impact Statement (EIS). One area specific EIS was completed for development on the San Juan National Forest in 1992. An EIS for the development of Southern Ute Indian minerals will be released this fall (1999).

However, anticipated future coalbed methane development will require additional NEPA compliance to address 160 acre spacing, enhanced recovery methods, and the significant environmental impacts that are now becoming apparent at and near the Fruitland outcrop. In the past, as well as today, numerous gas seeps and coal fires have been reported in mines and in surface exposures of the Fruitland coals in La Plata and Archuleta Counties.

Exacerbation of these seeps and fires appears to be increasing as coalbed methane gas extraction increases and large-scale withdrawal of coalbed produced water intensifies. Methane and hydrogen sulfide gas accumulations have been measured in soil vapor and confined spaces along the coal outcrop in concentrations deleterious to human health and safety, as well as being lethal to vegetation. Because of the diverse surface and mineral ownership involved, the interface with suburban development and potential environmental impacts, we must fulfill our NEPA responsibilities in a collaborative fashion with county governments, the state of Colorado, local environmental groups, and individual local residents.

To fulfill our NEPA and environmental responsibilities, we anticipate the need for an EIS in fiscal year (FY) 2000 for federal Fruitland coalbed methane development in the Northern San Juan Basin. In addition, we must continue to participate in Fruitland outcrop studies, and appropriate mitigation efforts researched, designed, and undertaken collaboratively by all responsible parties.

3. Program or administrative requirements BLM has not fulfilled:

Presently, there are two federal applications for permit to drill (APD) from Amoco Oil being evaluated in the San Juan Field Office (SJFO), pending additional information on environmental impacts. To date, and excepting the two Amoco APDs, all current coalbed methane development north of the Southern Ute Indian Reservation has been contained on private minerals. It is anticipated that future 160 acre and enhanced coalbed methane development will be proposed on federal surface and/or mineral estates. Over the past several years, mineral development has been extensive throughout the San Juan Basin. Within La Plata County, this mineral development has interfaced with increasing population and suburban development. La Plata County, local environmental groups and local individuals have requested the federal government as well as the Colorado Oil and Gas Conservation Commission (COGCC) conduct a complete coalbed methane development analysis.

The BLM SJFO, the SUIT, and the COGCC are undertaking an aggressive comprehensive and experimental study of the Fruitland Formation in the northern San Juan Basin of southwestern Colorado. This research study is

called the "3M Project" (3M), which refers to its three main components of geologic Mapping, ground water Monitoring, and computer Modeling. This unprecedented project seeks to understand, predict, and if necessary, mitigate the subsurface and surface environmental impacts resulting from the continuing production of coalbed methane in the San Juan Basin. This crucial 3M Project is estimated to cost in excess of \$1,000,000, with the majority of funding to date being contributed by the COGCC. The COGCC has received \$88,000 for the project in FY 1999 and \$707,230 for FY 2000. The Colorado State Geological Survey Office has received \$150,000 for the geologic mapping portion of the project. It is anticipated that the SUIT has paid \$132,500 toward the computer modeling aspect of the project. The BLM has contributed \$65,000 toward the reservoir modeling effort and \$155,000 toward the monitor wells in FY 1999, including \$75,000 through a Department of Energy (DOE) grant. Additionally, 1 1/2 full-time positions within the SJFO have been and continue to be dedicated to the program's environmental monitoring efforts on both Southern Ute Indian lands and Federal lands (including split estate). Funding for this study is critical to our understanding of potential long-term environmental impacts of this resource development and to the development of appropriate mitigation techniques.

The relationship to the Clean Water Act is unstudied and unknown at this time.

It is almost certain that an EIS will be needed to process current and future APDs for this gas development.

4. Outside Interest:

The impacts of this active area of coalbed methane development has become very controversial. Concerns include water quality of wells, and safety of residents and visitors. Obviously, the applicants who wish to develop the resource are also interested in seeing that this is resolved. The U.S. Forest Service will likely be involved in this issue also, for they administer some suitable lands in the area.

SUMMARY OF PLANNING/NEPA ACTIONS NEEDED

To properly administer our responsibilities for mineral development, environmental protection and to be responsive to the public under NEPA, three programs need to be pursued:

1. A Northern San Juan Basin EIS, to include a reasonable foreseeable development for all lands north of the Southern Ute Indian Reservation Line (The Ute Line): \$400,000 in FY 2000 and an additional \$400,000 per year for

FY 2001-2002.

2. Continue to support the 3M Project with technical personnel and \$100,000 for FY 2000 and \$100,000 yearly for FY 2001 through 2005 and beyond.

3. In collaboration with the COGCC or independently, develop the fourth "M" - Mitigation of outcrop impacts. Review the legal courses of action available to attach these mitigation measures to appropriate lessees/operators involved in the production of coalbed methane. Funding for this research estimated at \$100,000 per year (although a portion of this should/may be assumed by the operator/lessee).

ESTIMATED TIME FRAMES AND FUNDING NEEDS

FY 2000 - 2002 - Complete work as detailed above.

Funding Needs: \$500,000/year

FY 2003 - and beyond. Complete work as detailed above.

Funding Needs: \$500,000/year

2. Vermillion Basin

GENERAL LOCATION AND APPROXIMATE SIZE

Vermillion Basin is a large area that contains a wide variety of landscapes, ranging from pinon and juniper covered rugged hills in the south, to colorful badlands in the north. The area contains a variety of animals and rare plants. Current uses include livestock grazing, hunting, OHVs, and hiking. There are currently 5,700 acres under oil and gas lease in the extreme northeast corner, though none are developed nor held by production. Industry has requested an additional 7,137 acres for leasing. There are two state sections and one private inholding of 197 acres.

A wide variety of management prescriptions cover the area, consistent with its wide variety of landscapes and resources. The entire area is open to oil and gas leasing, in some areas restricted by fragile soils stipulations. There are two Areas of Critical Environmental Concern (ACEC) designated to protect rare plant species, geologic values, and scenic areas. Most of the area is open to OHV use except the ACECs which are limited to designated routes.

RANKING FACTORS

1. Need to Address Resource Conditions:

A RMP amendment and concurrent Wilderness Inventory are scheduled for Vermillion Basin in the year 2000. Colorado BLM made this decision based on a statewide wilderness designation proposal submitted by a Colorado citizens committee, and oil and gas development proposals. The current RMP is over ten years old and does not adequately address current land use issues and status. Portions of the area were not included in the 1980 Intensive Wilderness Area and changes may have occurred since then. The area contains a wide variety of often competing resource values including oil and gas leasing, grazing, recreation, fragile soils, two ACECs, and wilderness proposals. Oil and gas leasing and other significant actions are currently being held in abeyance until resource issues can be resolved through the plan amendment process.

In 1994, the Colorado Environmental Coalition (CEC) issued a Conservationists' Wilderness Proposal (CWP) to designate as wilderness approximately 1.3 million acres of BLM administered public land in Colorado. The CWP emphasized the importance of preserving lower altitude wild country which has traditionally not been considered worthy of wilderness designation.

In response to the CWP, the Colorado BLM developed policies and procedures in 1997 to guide consideration of discretionary actions in non-Wilderness Study Areas (WSAs) proposed for wilderness designation by the Conservationists. The policy holds in abeyance any discretionary actions which might have irreversible or irretrievable impacts until the wilderness issue raised by the Conservationists is addressed and resolved through the BLM planning process.

Because discretionary oil and gas leases were proposed in Vermillion Basin, a Roadless Review (the first phase of wilderness inventory) was conducted in 1997. Findings of the Roadless Review conclusions were announced in February, 1998, and public comment and additional information were requested, which might have bearing on the future management of the area.

In November of 1998, BLM Colorado announced Management Decisions on six CWP areas on the Western Slope, including Vermillion Basin. These decisions took into account comments from nearly 3,000 citizens statewide. For Vermillion Basin, the determination was made to undertake a RMP amendment to examine wilderness and other issues. A field inventory for wilderness values will be conducted as a part of the plan amendment process and will include the participation of the local community and interested parties. Implementation of this action will be initiated in FY 2000 and is expected to conclude in FY 2002. Oil and gas leasing and other discretionary actions

which may irreversibly or irretrievably affect the area will continue to be held in abeyance until this process is completed.

The RMP for this area was completed approximately ten years ago and the area contains a wide variety of often competing resource values ranging from interest in additional oil and gas leasing to the CWP. Portions of the area were not addressed in the original intensive wilderness inventory completed in 1980 and changes have occurred since then. Although special stipulations are in effect for oil and gas development to protect fragile soils and other natural features, much of the area is currently open to development with no special restrictions under the 1989 land use plan. A plan amendment will address current issues and conditions and involve the full spectrum of the public.

2. Anticipated changes in use (demand) not addressed in planning/NEPA documents:

Likely changes in the area are land tenure, wilderness, OHV designations, and oil and gas leasing. Other significant issues are anticipated. See ranking criteria No. 1 for additional information.

3. Program or administrative requirements we have not fulfilled:

As part of the amendment process, a thorough analysis of unfulfilled program and administrative requirements will be made and if appropriate, addressed in the amendment. The biggest issue is to address wilderness suitability for the area. See Criteria No. 1 for additional information and rationale.

4. Outside interest:

There is a high level of interest by the environmental community in the future management of the area. As a result, local government, ranchers, oil and gas industry, OHV users and other stakeholders also have a strong interest in future management of the area. See Criteria No. 1 for additional information and rationale.

PLANNING AND NEPA ACTIONS NEEDED

A plan amendment and EIS will be needed.

ESTIMATED TIME FRAMES AND FUNDING NEEDS

FY 2000: Wilderness inventory field work, scoping for plan amendment, and begin preparation for the draft plan/EIS.

Funding Needs: \$100,000

FY 2001: Continue amendment process.

Funding Needs: \$150,000

FY2002: Finish amendment.

Funding Needs: \$75,000

3. Bangs Canyon and South Shale Ridge

As a result of a statewide report on potential wilderness areas submitted to BLM by a citizens conservationist group, the Grand Junction Field Office (GJFO) initiated a roadless review inventory of two units identified in the proposal; Bangs Canyon and South Shale Ridge. The inventory found both areas to contain 5,000 acres or more of roadless lands. In the summer of 1999, a second phase of the inventory was completed that dealt with inventorying additional wilderness characteristics such as naturalness and outstanding opportunities for solitude and primitive recreation. This inventory found portions of both areas to have wilderness characteristics. The NEPA action needed as a result of these inventories is to consider amending the GJFO RMP to designate all or a portion of these two areas as administrative WSAs.

GENERAL LOCATION AND APPROXIMATE SIZE

Bangs Canyon is located south of Grand Junction, Colorado. It is approximately 21,472 acres. South Shale Ridge is located north of Grand Junction and west of Debeque, Colorado. It is approximately 33,400 acres.

RANKING FACTORS

1. Need to address resource conditions:

Both of these areas have been evaluated by BLM based on a proposal submitted by a citizens committee to designate these area as wilderness. BLM has currently completed an inventory of wilderness characteristics for both areas and found that portions of each area meet the Bureau's criteria for consideration as wilderness. The current GJFO RMP is over 13 years old and in some instances does not provide management direction that would likely protect wilderness values over the long term. South Shale Ridge contains a variety of competing resource values including oil and gas

